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SCREENING SITE INSPECTION REPORT
FOR
SPARTAN SIGN ASPHALT PAVING COMPANY
HOLT, MICHIGAN
U.S. EPA ID: MID005337092
SS ID: NONE
TDD: F05-8901-013
PAN: FMI0674SA

SEPTEMBER 13, 1990

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

SIGNATURE PAGE
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Prepared by: Russ Crittenden for D.W. Date: 9/14/90
David Wagner
FIT Team Leader
Ecology and Environment, Inc.

Reviewed by: _____ Date: 9/14/90
John Geiger
FIT State Coordinator
Ecology and Environment, Inc.

Approved by: _____ Date: 9/14/90
Jerome D. Oskvarek
FIT Office Manager
Ecology and Environment, Inc.

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Spartan Sign Asphalt Paving Company (Spartan) site under contract number 68-01-7347.

The site was initially discovered by the Michigan Department of Natural Resources (MDNR) in 1973 when an inspection of the on-site facility revealed that operations of the Spartan Sign Asphalt Paving Company (SSAPC) were causing erosion of the creek bed on the east portion of the site (Rossio 1973).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Chris Grobbel of MDNR and is dated August 2, 1985.

FIT prepared an SSI work plan for the Spartan site under technical directive document (TDD) F05-8702-265, issued on February 25, 1987. The SSI work plan was approved by U.S. EPA on January 6, 1989. The SSI of the Spartan site was conducted on October 24 and 25, 1989, under TDD F05-8901-013, issued on January 20, 1989.

The FIT SSI included an interview with a site representative, a reconnaissance inspection of the site, and the collection of six soil/sediment samples and one monitoring well sample.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

> preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and a reconnaissance inspection of the site.

2.2 SITE DESCRIPTION

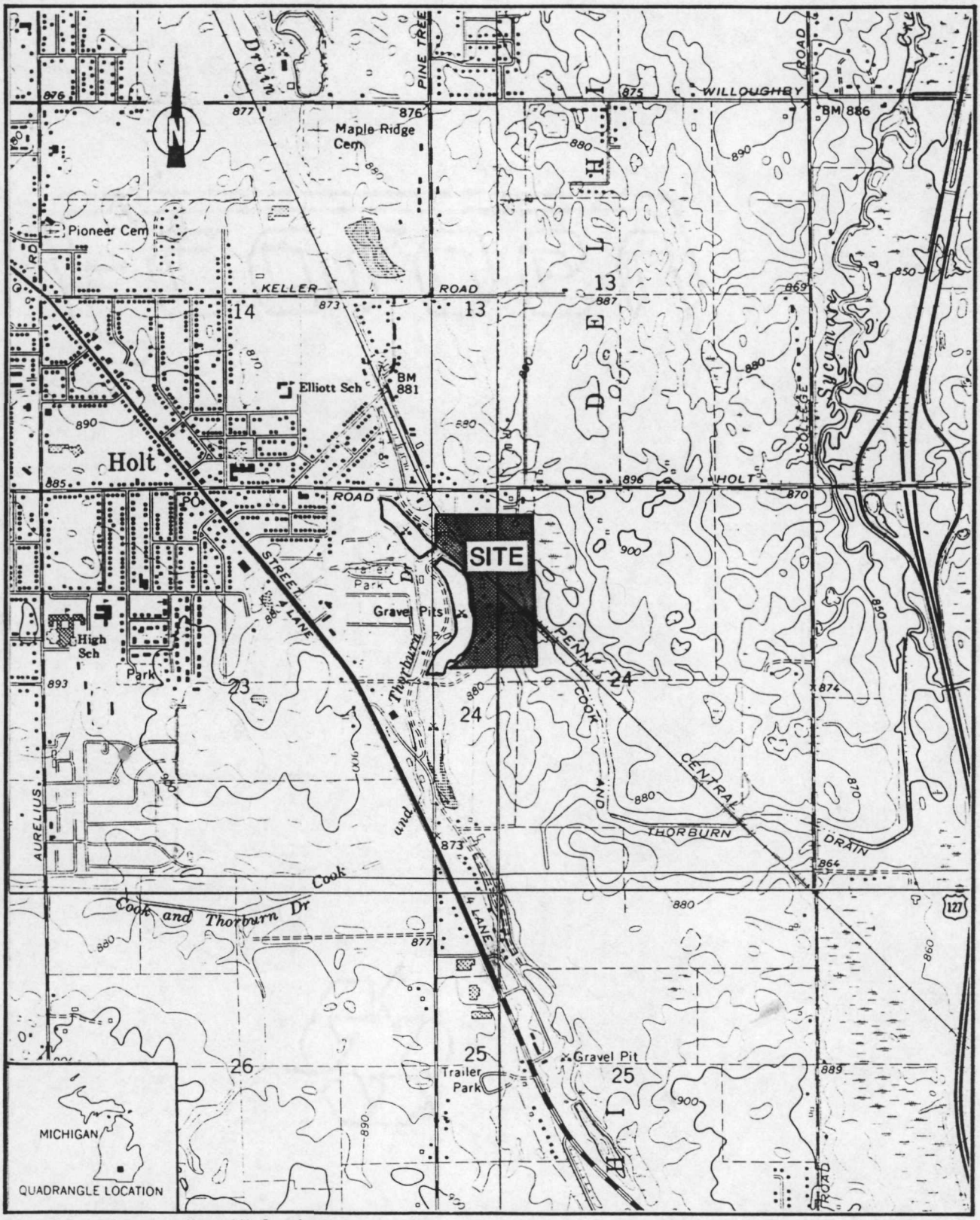
According to D. J. Goff, President of SSAPC, the Spartan site is active as a road-marking facility, sign fabricating shop, and heavy equipment shop (Goff 1989). The site consists of a 50-acre parcel of land. An office building, a building housing the company's operations, and several paved areas are located on the site (Goff 1989).

The site is located immediately east of the Holt city limits in Ingham County, Michigan (NW1/4 sec. 24, T.3N., R.2W.), on the south side of Holt Road. The area around the site is moderately populated (see Figure 2-1 for site location).

A 4-mile radius map of the Spartan site is provided in Appendix A.

2.3 SITE HISTORY

According to Goff, SSAPC operated as an asphalt plant from 1954 until 1986. A road-marking operation began at the site in 1965. In 1986, a sign fabricating shop and a heavy equipment shop also began operations at the site. During the period that the site was operated as an asphalt plant, gravel was excavated from three areas west of the site. After excavation, the fine materials were crushed and washed on-site. Equipment used in these processes was cleaned with hot water



SOURCE: USGS, Aurelius, MI Quadrangle, 7.5 Minute Series, 1965; East Lansing, MI Quadrangle, 7.5 Minute Series, 1965; Lansing South, MI Quadrangle, 7.5 Minute Series, 1965, Photorevised 1970;Mason, MI Quadrangle, 7.5 Minute Series, 1970.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

and soap, and the wash water was discharged to a settling pond located adjacent to a wetland in the southeast portion of the site, along Cook and Thorburn Drain. Discharge of the wash water ceased in 1986, when the on-site asphalt operation was closed (Goff 1989). Excavation of gravel also ceased at that time. The three pits from which gravel was mined are now filled with water, forming three ponds west of the site.

In January 1974, SSAPC was requested to complete an application for a National Pollutant Discharge Elimination System (NPDES) permit in order to obtain a permit for its discharge of wash water to Cook and Thorburn Drain by the end of 1974, as required by U.S. Public Law 92-500 (Bek 1974). The application was approved in 1980 (Darling 1980).

In 1981, Keck Consulting Services, Inc. (KCS), of Williamston, Michigan, conducted a hydrogeologic investigation of the site (KCS 1981). The scope of the investigation, as directed by MDNR, was to determine whether site operations were affecting groundwater in the area. Of major concern was the effect of SSAPC's discharge of wash water on the Mason Esker, a geological formation that underlies the site. The Mason Esker is a permeable glacial feature which provides an interconnection between the glacial and bedrock aquifers. The bedrock aquifer, the Saginaw Formation, is a major groundwater source in the area.

During the study, five auger borings were completed to depths of 30 to 45 feet to bedrock around the discharge area on the settling pond. Four of the five borings were used to install four monitoring wells, in order to determine groundwater flow direction and groundwater quality in the area of the site.

As a result of the hydrogeologic investigation, KCS concluded that SSAPC operations were not affecting groundwater quality in the area of the site and that SSAPC's discharge water was of better quality than local groundwater (KCS 1981).

In a December 1982 inspection of the site conducted by the Ingham County Health Department, approximately 50 barrels were observed to be stored on the ground along a driveway connecting paved areas surrounding each of the two on-site buildings. During this inspection, paint sludge was observed on the ground surface near the barrels (Ceru 1983).

From 1982 until the present, no other investigations have been performed at the Spartan site. There have been no other regulatory actions taken at the site.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the Spartan site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan, with two exceptions. Only one of the four KCS-installed monitoring wells was sampled because FIT could not locate the other three KCS-installed monitoring wells on-site. Also, FIT collected six of the proposed seven soil/sediment samples, having determined that six samples would adequately characterize the site.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the Spartan site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

David Wagner, FIT team leader, and Russ Crittenden, FIT team member, conducted an interview with SSAPC President D. J. Goff on October 24, 1989, at 9:30 a.m. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the Spartan site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection was begun at 10:00 a.m. and

included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was not accompanied by the site representative during the reconnaissance inspection.

Reconnaissance Inspection Observations. The Spartan site is bounded on the north by Holt Road, and on the south and east by wooded areas. On the west the site is bounded by one of the three mine pit ponds, designated by FIT as Pond #2 for purposes of the present report. Pond #1 lies northwest of Pond #2, and Pond #3 lies southwest of the site, near Hogsback Road.

Pennsylvania Central Railroad tracks run northwest-southeast across the site. Cook and Thorburn Drain runs north in the area west of the site into the northernmost of the three ponds. The drain continues, exiting the pond and running southeast across the site, parallel to the west side of the railroad tracks. An on-site drain leads east from Pond #2 to Cook and Thorburn Drain. FIT observed a gully at the confluence of the on-site drain and Cook and Thorburn Drain. Soil from the central portion of the site appeared to have eroded toward the drain via this gully (see Figure 3-1 for site features).

The office building of SSAPC is located in the northern portion of the site and the manufacturing plant is in the southern portion of the site. FIT observed approximately 200 barrels, in conditions varying from poor to good, in storage areas adjacent to the plant's northeast and southwest sides. The barrels were labeled as containing various materials and paints for road marking.

Much of the site is paved with concrete or covered with gravel. A depression in the on-site wetland, with a small amount of standing water, marked the location of the former settling pond. Only one of the on-site monitoring wells could be located by FIT. The site is not fenced. No site security structures were observed by FIT during the reconnaissance inspection.

Photographs of the Spartan site are provided in Appendix C.

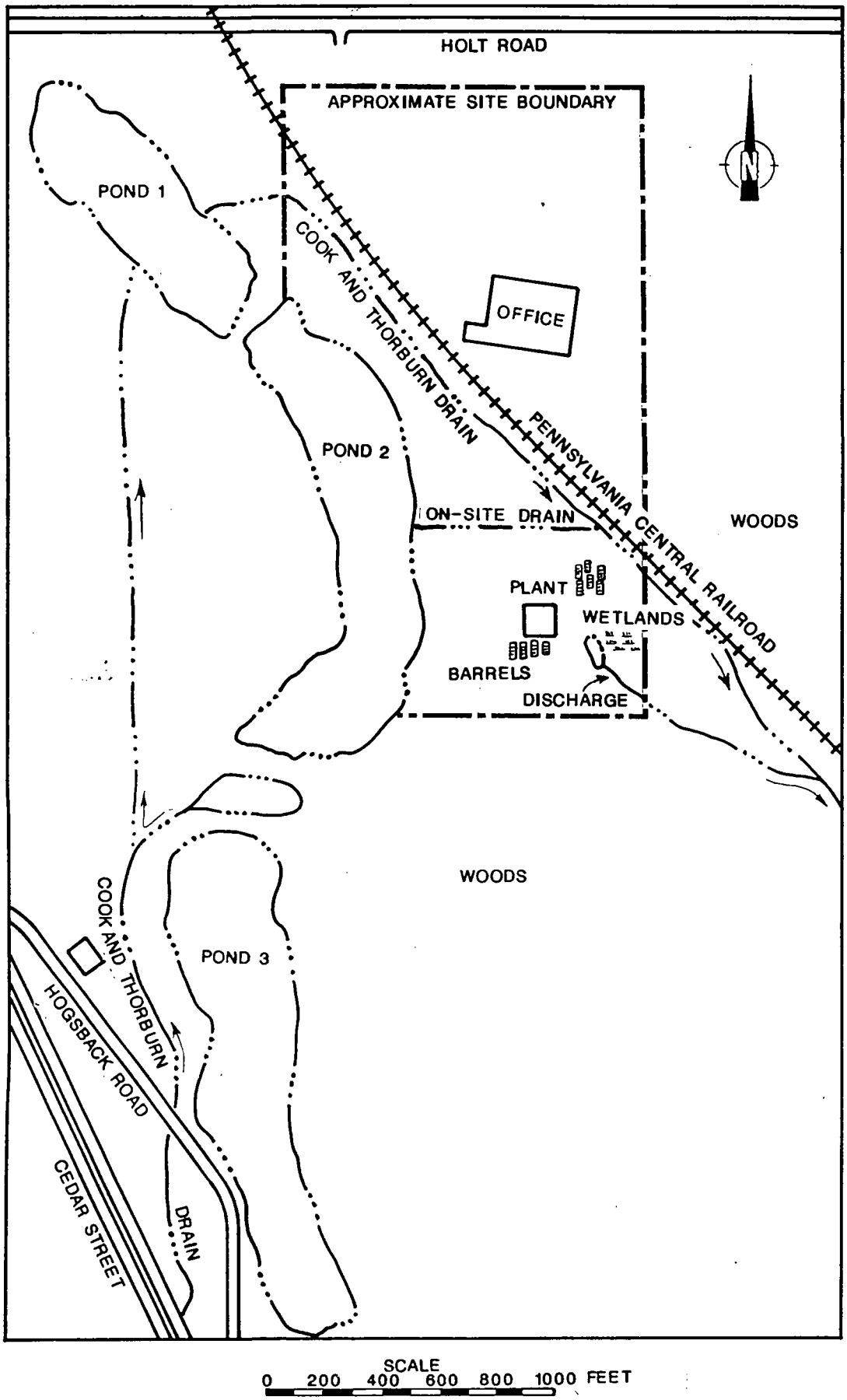


FIGURE 3-1 SITE FEATURES

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or U.S. EPA Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On October 24, 1989, FIT collected five soil/sediment samples from suspected areas of contamination at the site. These samples were collected and analyzed in order to characterize waste on-site. One potential background soil sample was also collected from an undisturbed area south of the site.

On October 25, 1989, FIT collected one monitoring well sample in order to assess groundwater under the site.

Soil/Sediment Sampling Procedures. Sediment sample S1 was collected in an area of suspected contamination from Cook and Thorburn Drain along the east boundary of the Spartan site (see Figure 3-2 for soil/sediment sampling locations). Sediment sample S2 was also collected from the drain, but upstream of the confluence with the on-site drain originating from Pond #2. Sediment sample S3 was also collected from Cook and Thorburn Drain, downstream of both S1 and S2. Sediment sample S4 was collected from the gully at the confluence of the on-site drain and Cook and Thorburn Drain. Soil sample S5 was collected at the northwest corner of the plant building, near some barrels. The soil in that area was stained on the ground surface. Soil sample S6 was collected from a location in the wooded area south of the site, in an undisturbed, more densely vegetated area. Soil sample S6 was collected as a potential background sample in order to characterize the naturally occurring soil constituents in the area of the site.

All soil/sediment samples were collected at a depth of approximately 6 inches, using a hand trowel. The soil/sediment samples were then transferred directly to sample bottles, using the hand trowel.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., trowels and gloves) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the

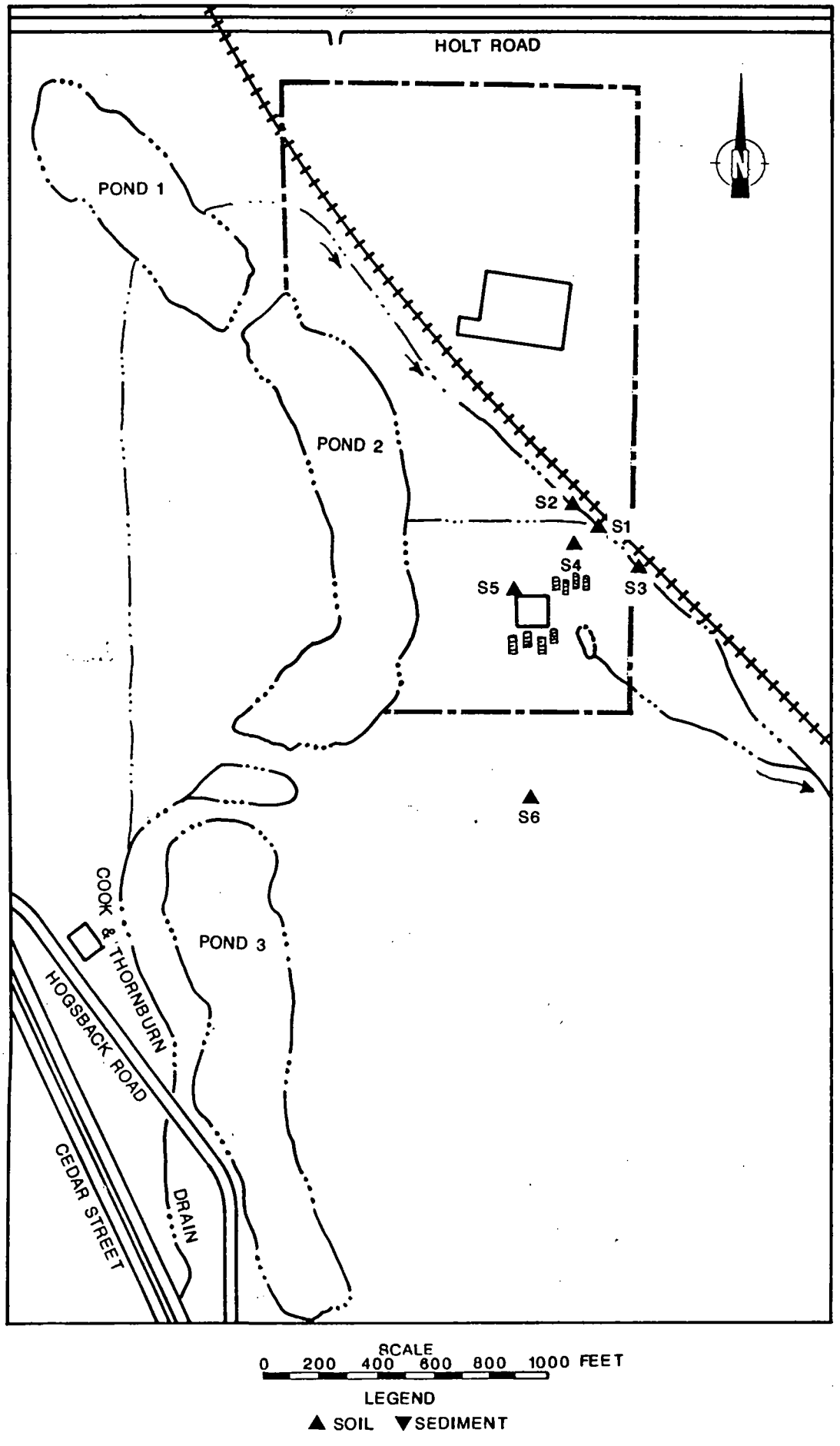


FIGURE 3-2 SOIL/SEDIMENT SAMPLING LOCATIONS

equipment with distilled water before the collection of each sample (E & E 1987). All soil/sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil/sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP) for TCL compounds by Clayton Environmental Consultants of Research Triangle Park, North Carolina, and for TAL analytes by DataChem of Salt Lake City, Utah.

Monitoring Well Sampling Procedures. FIT collected one groundwater sample from a monitoring well at the Spartan site on October 25, 1989 (see Figure 3-3 for monitoring well sampling location). The sample, designated MW2, was collected to determine whether TCL compounds and/or TAL analytes are present in groundwater on-site.

At the time of the SSI, the monitoring well was covered with a protective casing, but was not locked. The depth of the on-site monitoring well at the time of sampling was 31.8 feet. Depth to static water level was 19.0 feet below the ground surface.

In accordance with U.S. EPA quality assurance/quality control requirements, a duplicate monitoring well sample and a field blank sample were collected. The duplicate sample was collected at location MW2. The field blank sample was prepared from distilled water.

The monitoring well was purged of three to five volumes of standing water prior to the collection of each sample. The monitoring well samples were collected with stainless steel bailers that had been scrubbed with a solution of detergent (Alconox) and distilled water and triple-rinsed with distilled water prior to the collection of each sample (E & E 1987).

As directed by U.S. EPA, the monitoring well samples were analyzed using the U.S. EPA CLP for TCL compounds by Clayton Environmental Consultants of Research Triangle Park, North Carolina, and for TAL analytes by DataChem of Salt Lake City, Utah.

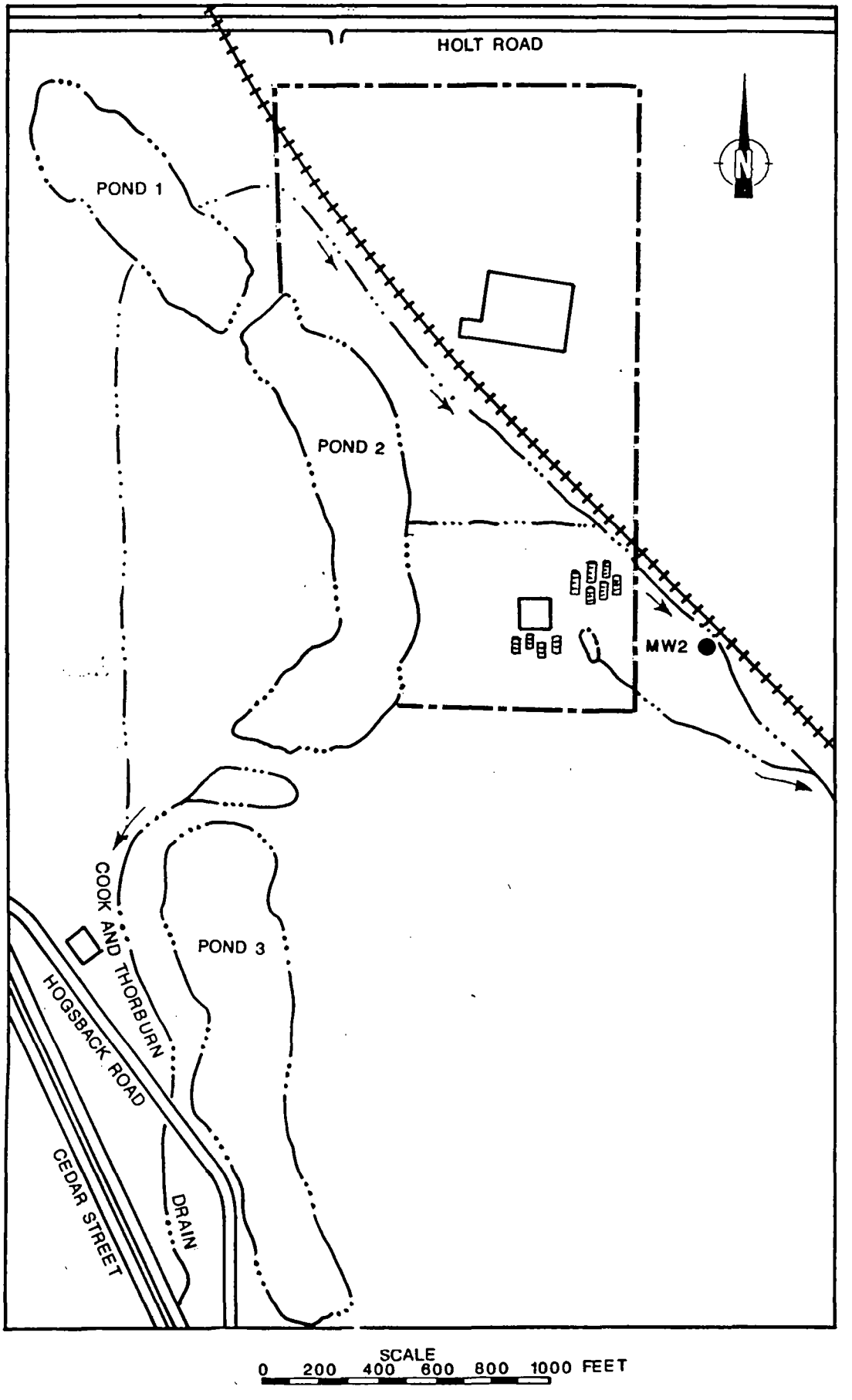


FIGURE 3-3 MONITORING WELL SAMPLING LOCATION

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section presents results of the chemical analysis of FIT-collected soil/sediment and monitoring well samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil/Sediment Samples. Chemical analysis of FIT-collected soil/sediment samples revealed substances from the following groups of TCL compounds and TAL analytes: aromatics, heavy metals, metals, common laboratory artifacts, and common soil constituents (see Table 4-1 for complete chemical analysis results of FIT-collected soil/sediment samples).

Monitoring Well Samples. Chemical analysis of the FIT-collected monitoring well samples revealed substances from the following groups of TCL compounds and TAL analytes: heavy metals, metals, and groundwater constituents common to the area of the site (see Table 4-2 for complete chemical analysis results of FIT-collected monitoring well samples).

Quantitation/detection limits used in the analysis of soil/sediment and monitoring well samples are provided Appendix D.

The analytical data for the chemical analysis of soil/sediment and monitoring well samples collected for this SSI have been reviewed by U.S. EPA and FIT for compliance with terms of the FIT contract, and the review has been approved by U.S. EPA. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results tables presented in this section.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6
Date	10/24/89	10/24/89	10/24/89	10/24/89	10/24/89	10/24/89
Time	1200	1210	1220	1230	1315	1300
CLP Organic Traffic Report Number	EGN48	EGN49	EGN50	EGN51	EGN52	EGN53
CLP Inorganic Traffic Report Number	MEGL16	MEGL17	MEGL18	MEGL19	MEGL20	MEGL21
Compound Detected (values in µg/kg)						
Volatile Organics						
toluene	--	--	--	--	7	11
Analyte Detected (values in mg/kg)						
aluminum	5,200	18,400	2,460	3,340	2,790	8,240
arsenic	4.9JNB	15.5JN	1.8JNB	2.4JN	3.5JN	4.7JN
barium	68.9B	163B	18.4B	20.6B	23.2B	90.7
calcium	63,500	57,500	26,200	7,220	61,700	3,640
chromium	17.2	40.8	7.9	6.9	11	12.5
copper	11B	30.2	3.0JB	2.5JB	5.2JB	7.4J
iron	13,900	29,600	5,080	6,860	6,850	10,500
lead	17.7	55.3	3.9	4.3	14.5	25
magnesium	9,010	12,300	5,860	3,990	13,300	1,610
manganese	291	1,130	130	51.9	166	1,560
potassium	1,110B	3,480B	--	--	431B	957B
selenium	0.65B	2.0B	--	--	--	0.60B
thallium	1.1B	--	--	--	0.27B	--
vanadium	19.7B	51.4	9.4B	11.8	12.6	19.7
zinc	63.9	171	19.4	11.6	28.7	48.7

-- Not detected.

Table 4-1 (Cont.)

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Table 4-2

RESULTS OF CHEMICAL ANALYSIS OF

FIT-COLLECTED MONITORING WELL SAMPLES

Sample Collection Information and Parameters	Sample Number MW2	Duplicate	Blank
Date	10/25/89	10/25/89	10/25/89
Time	1030	1030	1000
CLP Organic Traffic Report Number	EGN55	EGP22	EGN61
CLP Inorganic Traffic Report Number	MEGL23	MEGF80	MEGL29
Temperature (°C)	†	†	†
Specific Conductivity (μmhos/cm)	†	†	†
pH	†	†	†
Compound Detected (values in μg/L)			
Volatile Organics			
chloroform	--	--	2J
Analyte Detected (values in μg/L)			
aluminum	38.7JB	56.3JB	78.2JB
arsenic	13.5	11.9	--
barium	184B	174B	--
calcium	130,000	133,000	--
copper	--	--	23B
iron	1,320	1,080	42B
lead	1.3JNWB	--	--
magnesium	33,100	33,800	--
manganese	221	226	--
potassium	3,380B	3,710B	--
sodium	5,620	5,740	--
zinc	1,090J	1,570J	--

† Not recorded.

-- Not detected.

Table 4-2 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the Spartan site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Analysis of FIT-collected monitoring well sample MW2 and duplicate revealed the presence of several TAL analytes. However, these analytes are all common soil and groundwater constituents and cannot be attributed to the Spartan site.

However, a potential does exist for TCL compounds and TAL analytes to migrate from the site to groundwater in the area of the site, based on the followed information regarding the site.

- The TAL analytes arsenic (15.5JN mg/kg), chromium (40.8 mg/kg), copper (30.2 mg/kg), and lead (55.3 mg/kg) were detected in sediment sample S2 at levels exceeding those detected in background soil sample S6.

- Waste, including paint sludge (Ceru 1983) and wastewater, was deposited on-site (Rossio 1973).

The potential for TCL compounds and TAL analytes to migrate from the site to groundwater is also based on the following information concerning the geology of the area of the site.

Bedrock in the vicinity of the Spartan site consists of the sandstone and shale of the Saginaw Formation (Dorr and Eschman 1971). This formation is utilized for drinking water and is encountered at a depth of approximately 30 feet below the surface (KCS 1981).

Glacial deposits overlying the bedrock consist primarily of sand and gravel, with discontinuous clay units. A review of soil boring logs produced by KCS indicates stratification, consisting of surficial clay underlain by a sand horizon, that is in turn underlain by basal clay till (KCS 1981). Of special concern is the fact that the gravel excavations of past operations at the site penetrated the Mason Esker. The Mason Esker is a permeable glacial unit that may provide a direct flow path for any contaminant from the site directly to the Saginaw Formation, which is a major groundwater source (KCS 1981). Because there are no continuous confining layers underlying the glacial deposits within a 3-mile radius of the site, glacial drift and bedrock aquifer are together considered to be the aquifer of concern (AOC) because they are hydraulically connected.

According to area well logs and the hydrogeologic study performed by KCS, the depth to the AOC is approximately 6 feet below the ground surface. According to KCS, groundwater appears to flow from the north, west, and south, draining to the east, parallel to Cook and Thorburn Drain.

The target population potentially affected by groundwater contamination from the site consists of 133,239 persons. This population includes the 131,546 residents of the cities of Lansing and Holt who obtain their drinking water from the Lansing municipal water system. [redacted] Water from all of the wells in Lansing's water system is pumped to central blending and treatment facilities prior to distribution (Peterson 1990). The target population of groundwater contamination also includes the 1,693 persons using private wells located within the 3-mile radius. This population was calculated by counting

houses on United States Geological Survey (USGS) topographic maps of the area (USGS 1965, 1965a, 1970, 1970a). Approximately 634 homes were counted within a 3-mile radius of the Spartan site and outside the city water distribution system. The total number of homes was multiplied by a persons-per-household value of 2.67 for Ingham County (U.S. Bureau of the Census 1982).

5.3 SURFACE WATER

The nearest surface water bodies downslope of the Spartan site are Cook and Thorburn Drain, and the associated ponds, which run northwest-southeast across the site. TCL compounds and TAL analytes were detected in sediment samples from Cook and Thorburn Drain. A potential does exist for surface water contamination, because Cook and Thorburn Drain runs through the site and there are no surface water diversion structures present on-site.

According to USGS maps and FIT observations, Cook and Thorburn Drain flows north to Pond #1 and then flows east and southeast along the Pennsylvania Central Railroad tracks. The drain eventually flows into Sycamore Creek, approximately 1 1/2 miles downstream from the site.

A target population cannot be determined because neither Cook and Thorburn Drain nor Sycamore Creek is used for drinking water. Although the surface water in the area is not used for drinking, it's possible contamination is of concern as the associated ponds may be used for recreation.

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the Spartan site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, oxygen meter, and explosimeter) did not detect levels above background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does not exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates, based on the fact that most of the area of suspected contamination at the site was paved or heavily vegetated.

5.5 FIRE AND EXPLOSION

Acording to federal, state, and local file information reviewed by FIT, no documentation exists of an incident of fire or explosion at the site. According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representative, no incidents of direct contact with TCL compounds or TAL analytes at the Spartan site have been documented.

However, a potential does exist for the population in the vicinity of the site to come into contact with contaminants on-site because the site is not completely fenced and is easily accessible.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site is 3,513 persons. This population was calculated by counting houses within a 1-mile radius of the site on USGS topographic maps (USGS 1965, 1965a, 1970, 1970a) and multiplying this number by a persons-per-household value of 2.67 for Ingham County (U.S. Bureau of the Census 1982).

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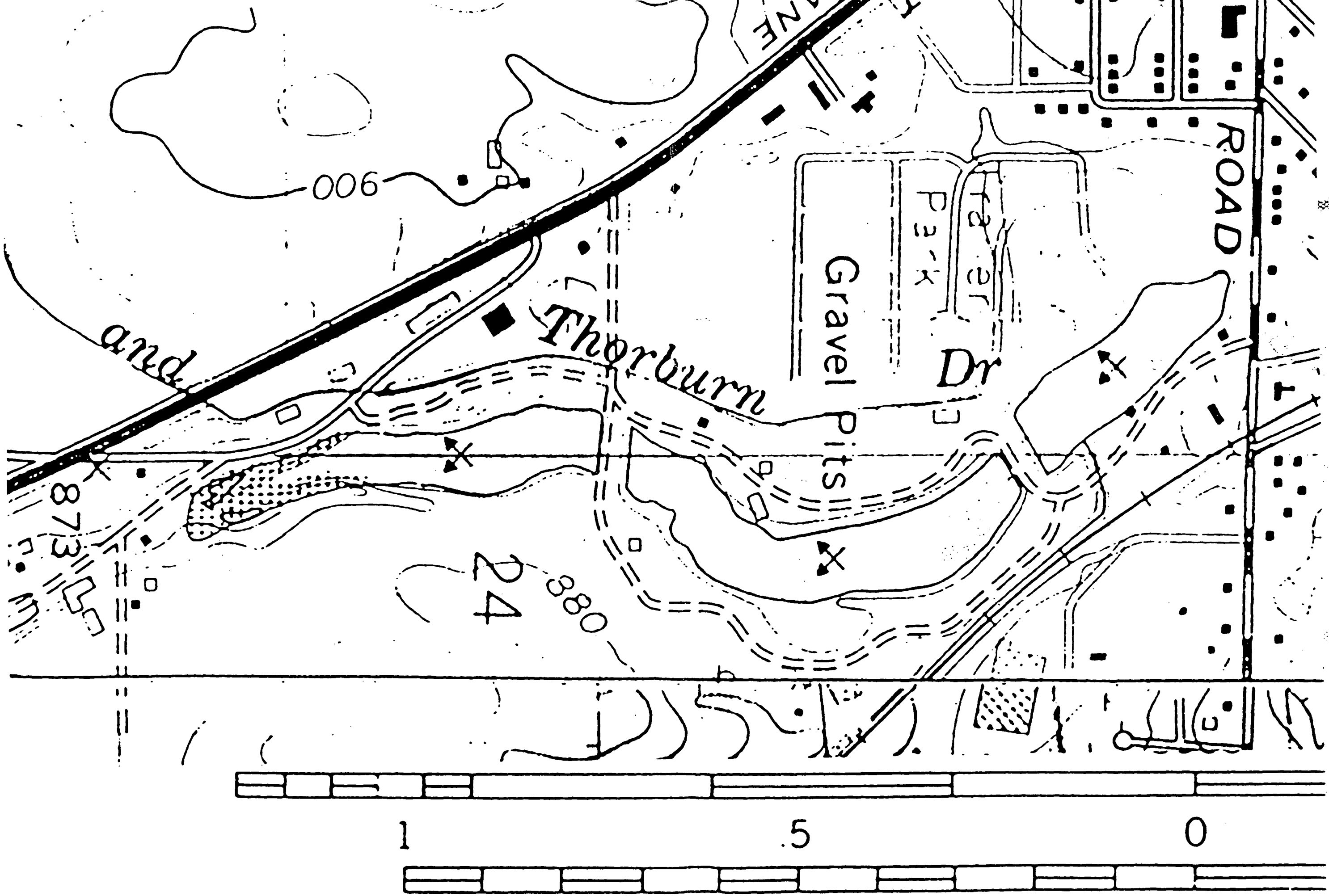
APPENDIX A

SITE 4-MILE RADIUS MAP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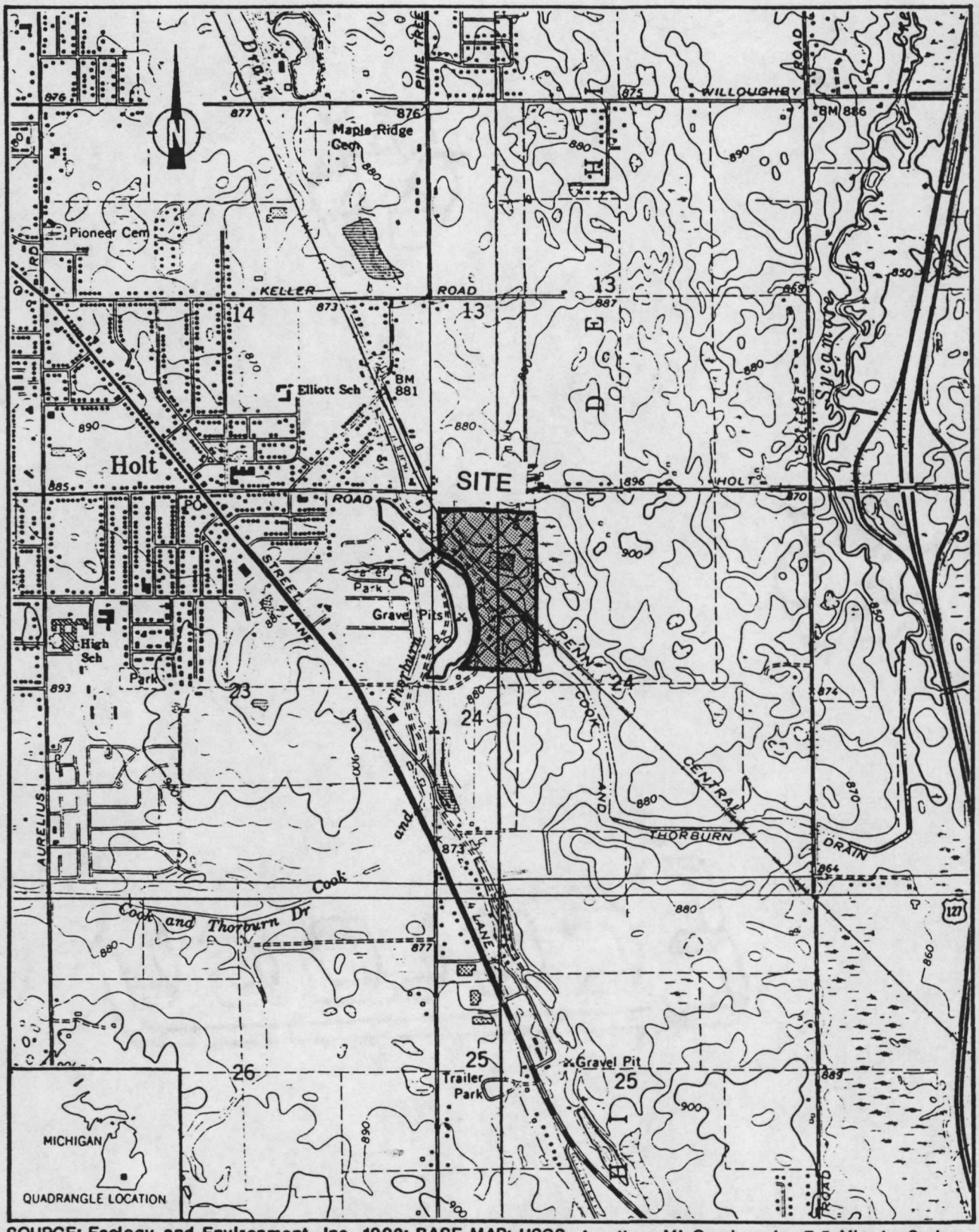
Thorburn
and
Gravel Pit
Rd
Dr
ROAD
873
880
24
1
.5
0

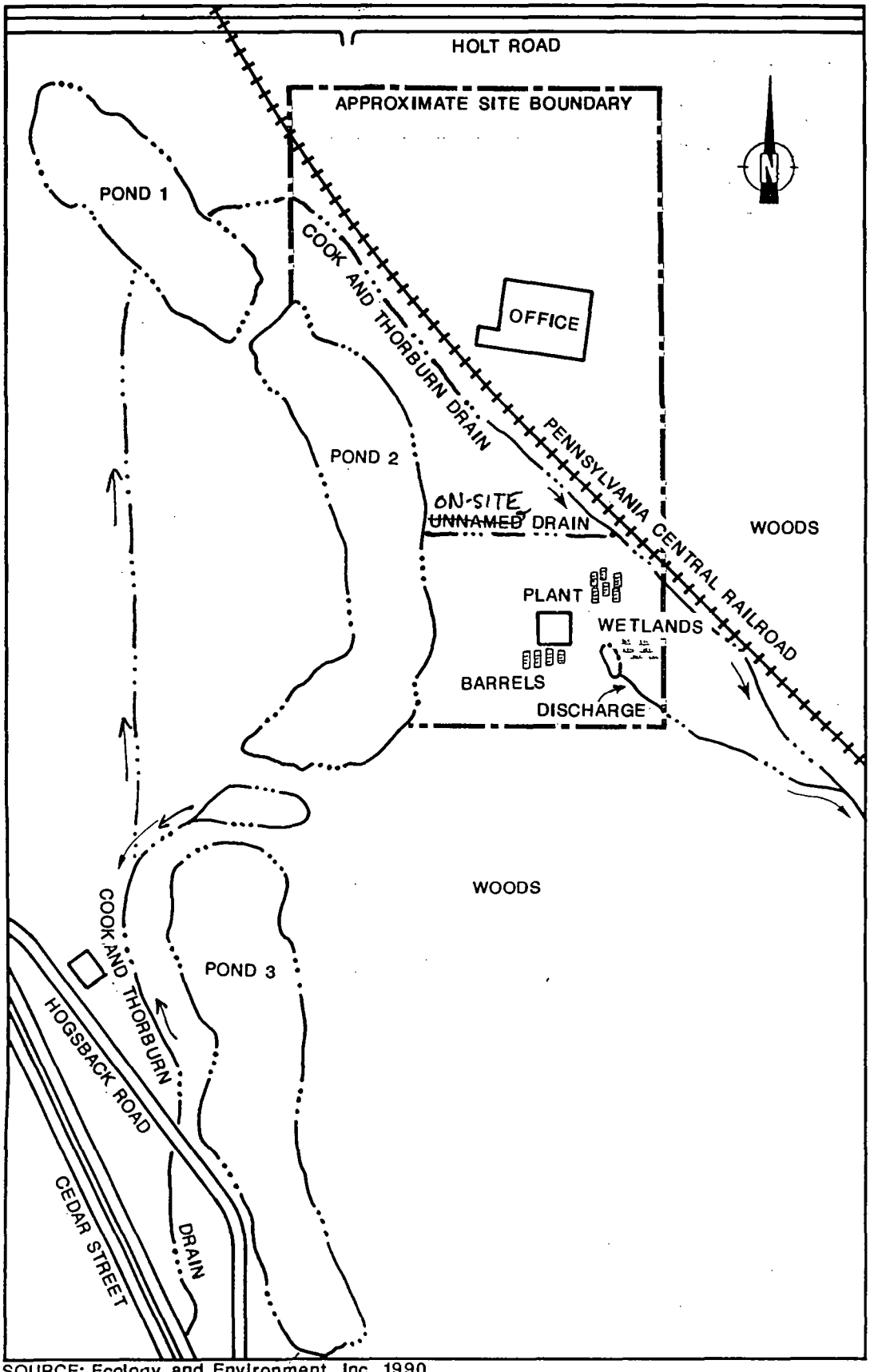


SOURCE: Ecology and Environment, Inc. 1990; BASE MAP: USGS, Aurelius, MI Quadrangle, 7.5 Minute Series, 1965; East Lansing, MI Quadrangle, 7.5 Minute Series, 1970; Lansing South, MI Quadrangle, 7.5 Minute Series, 1965; 1970; Mason, MI Quadrangle, 7.5 Minute Series, 1970.

SCALE

0 ½ 1 MILE

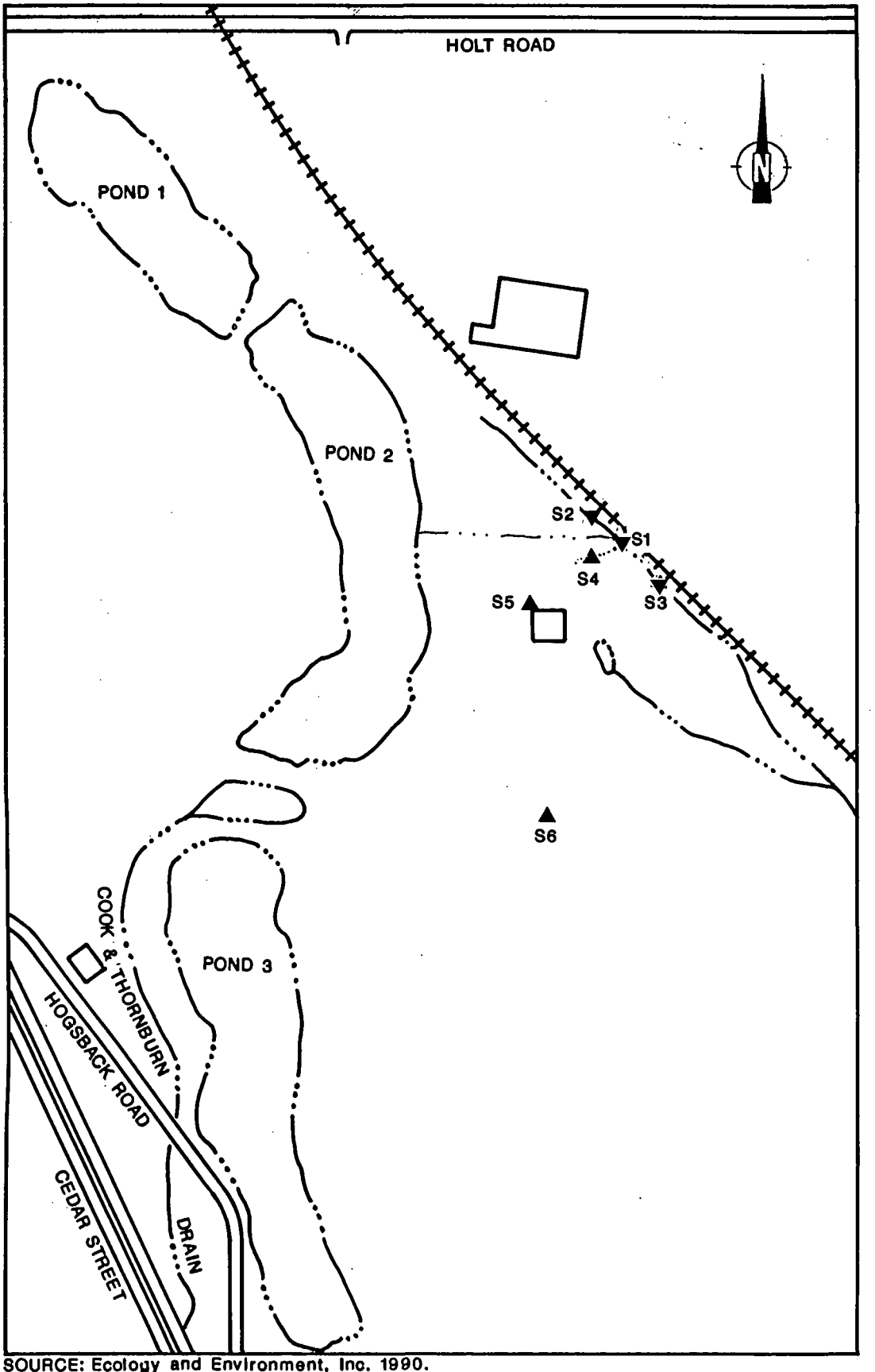
FIGURE 2-1 SITE LOCATION



SOURCE: Ecology and Environment, Inc. 1990.

SCALE
0 200 400 600 800 1000 FEET

FIGURE 3-1 SITE FEATURES

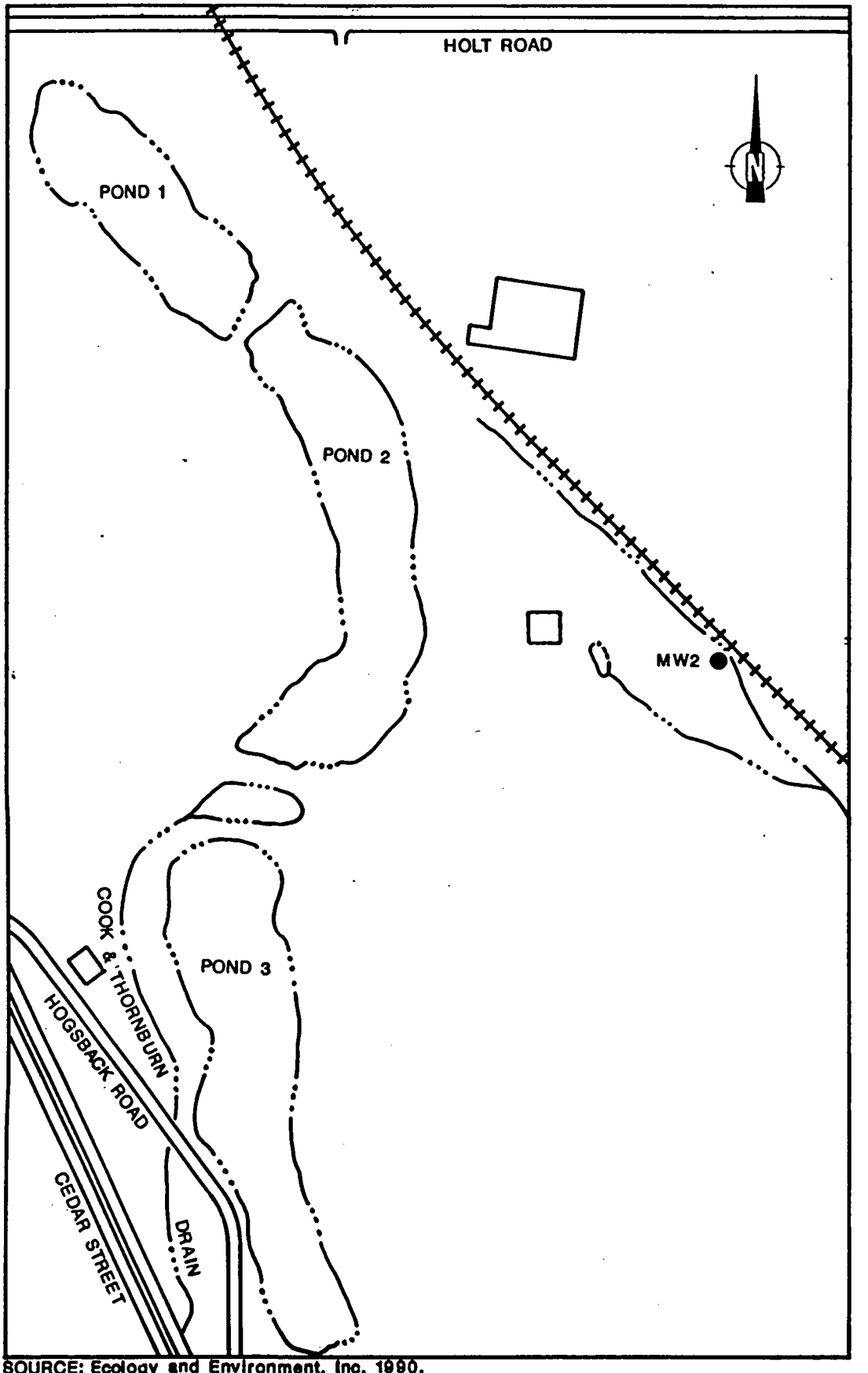


SOURCE: Ecology and Environment, Inc. 1990.

SCALE
0 200 400 600 800 1000 FEET

FIGURE 3-2 SOIL/SEDIMENT SAMPLING LOCATIONS

▲ SOIL SAMPLE ▼ SEDIMENT SAMPLE



SOURCE: Ecology and Environment, Inc. 1990.

SCALE
0 200 400 600 800 1000 FEET

FIGURE 3-3 MONITORING WELL SAMPLING LOCATIONS

APPENDIX B

U.S. EPA FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Spartan Sign Asphalt Paving Company	4025 Holt Rd. P.O. Box 130				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Holt	MI	48842	Ingham	065	—

09 COORDINATES		10 TYPE OF OWNERSHIP (Check one)
LATITUDE	LONGITUDE	■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
42°38'08.0"	084°30'01.0"	☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 24 / 89 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	1954 (BEGINNING YEAR) / present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ■ B. EPA CONTRACTOR Ecology and Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
David Wagner	Limnologist	E&E	(312) 663-9415
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
John Geiger	Hydrologist	E&E	(312) 663-9415
Phil Richard	Wildlife Manager	E&E	(312) 663-9415
Russ Crittenden	Geographer	E&E	(312) 663-9415
Mike Feltes	Natural Resource Manager	E&E	(312) 663-9415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
D.J. Goff	President	4025 Holt Rd. Holt, MI	(517) 694-0407
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	0900	Sunny, 60°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Rod Mosier	MDNR - Lansing District Office	(517) 322-1300

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
David Wagner	U.S. EPA	E&E	(312) 663-9415	4 / 12 / 90 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ■ C. SLUDGE
- ☐ D. OTHER (Specify) _____
- ☐ E. SLURRY
- ■ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

- TONS: unknown
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ■ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	See Tables 4-1 and 4-2 of report				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS	↓		FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL
SSI conducted 10/24/89

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005337092

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 133,239 — 04 NARRATIVE DESCRIPTION

See Section 5.2 of report

01 ■ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: none — 04 NARRATIVE DESCRIPTION

See Section 5.3 of report

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

See Section 5.4 of report

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

See Section 5.5 of report

01 ■ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3513 — 04 NARRATIVE DESCRIPTION

See Section 5.6 of report

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 10/24/89) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: ~50 (Acres) — 04 NARRATIVE DESCRIPTION

See Section 5.2 of report

01 ■ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 133,239 — 04 NARRATIVE DESCRIPTION

See Section 5.2 of report.

01 ■ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: ~100 — 04 NARRATIVE DESCRIPTION

See Section 5.6 of report

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 133,239 — 04 NARRATIVE DESCRIPTION

See Sections 5.2 and 5.6 of report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 □ OBSERVED (DATE: _____) ■ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION
Damage to local flora could potentially occur through contact with potentially contaminated soil and water resources.

01 ■ K. DAMAGE TO FAUNA — 02 □ OBSERVED (DATE: _____) ■ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
Damage to local fauna could potentially occur through contact with potentially contaminated soil and water resources.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 □ OBSERVED (DATE: _____) ■ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION
Contaminants from the site could potentially bioaccumulate throughout the local food chain.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff/Standing liquids, Leaking drums) — 02 □ OBSERVED (DATE: _____) ■ POTENTIAL □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 133,239 — 04 NARRATIVE DESCRIPTION
See sections 2.3, 5.2, and 5.6 of report

01 ■ N. DAMAGE TO OFFSITE PROPERTY — 02 □ OBSERVED (DATE: _____) ■ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION
See Sections 5.3 and 5.6 of report

01 □ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 □ OBSERVED (DATE: _____) □ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION
None

01 □ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 □ OBSERVED (DATE: _____) □ POTENTIAL □ ALLEGED
04 NARRATIVE DESCRIPTION
None

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 133,239

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
SSI conducted 10/24/89

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
■ A. NPDES	MO0497	4/30/80	unknown	
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
■ C. DRUMS, ABOVE GROUND	unknown	
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
■ I. OTHER (Specify) wetland	unknown	

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

None

05 OTHER

■ A. BUILDINGS ON SITE
2

06 AREA OF SITE

~50 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Many drums were observed by FIT varying from good to poor condition.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS

See Section 5.6 of report

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

State and FIT files Chicago, IL

SSI conducted 10/24/89

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ■	A. ☐	B. ☐	C. ■	A. 1.5 (mi)
NON-COMMUNITY	C. ☐	D. ■	D. ☐	E. ☐	F. ☐	B. on-site (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 133,239

03 DISTANCE TO NEAREST DRINKING WATER WELL on-site (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
6 (ft)	east	6 (ft)	unknown (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

See Section 5.2 of report

10 RECHARGE AREA		11 DISCHARGE AREA	
■ YES ☐ NO	COMMENTS Groundwater is probably recharged by rain water.	☐ YES ☐ NO	COMMENTS unknown

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ■ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Cook and Thorburn Drain	☐	on-site (mi)
Sycamore Creek	☐	~1.5 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3513 NO. OF PERSONS	B. 10,845 NO. OF PERSONS	C. 25,383 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
4062	0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

See Section 2.2 of report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ■ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm sec) ■ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
~33 (ft)	unknown (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
8.75 (in)	2.20 (in)	< 3 %	east	< 3 %

09 FLOOD POTENTIAL

SITE IS IN unknown YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. on-site (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A _____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/(INDUSTRIAL) — (RESIDENTIAL AREAS) NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES — AGRICULTURAL LANDS: PRIME AG LAND / AG LAND

A. 0.2 (mi) B. 0.1 (mi) C. unknown (mi) D. unknown (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL

SSI conducted 10/24/89

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	1	See Section 3.4 of report	Available
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL/SEDIMENT	6	See Section 3.4 of report	Available
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	No readings above background
Hydrogen Cyanide Met.	
Radiation Mini-Alert	
O_2 Meter	
Explosimeter	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology and Environment, Inc. (Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS Ecology and Environment, Inc. Chicago, IL

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Temperature, conductivity, and pH readings were not collected for the monitoring well sample.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

SSI conducted 10/24/89

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Spartan Asphalt Paving Co.	—	4025 W. Holt Rd. P.O. Box 130		Holt	MI	48842
N/A						

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
Same						
N/A						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
N/A						

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. CURRENT OPERATOR (Provide if different from owner)		OPERATOR'S PARENT COMPANY (If applicable)	
01 NAME: Same as owner	02 D+B NUMBER	10 NAME: N/A	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER		

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)		PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)	
01 NAME: N/A	02 D+B NUMBER	10 NAME: N/A	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005337092

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005337092

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES SUMP 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE	03 AGENCY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005337092

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION: None

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

State and FIT files Chicago, IL

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005337012

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ■ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

None

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

State and FIT files Chicago, IL

EPA FORM 2070-13 (7-81)

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 1 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1200

DIRECTION OF PHOTOGRAPH:
> NW

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S1

DESCRIPTION: > Sediment sample S1

>

DATE: > 10/24/89

TIME: > 1200

DIRECTION OF PHOTOGRAPH:
> NW

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S1

DESCRIPTION: > Perspective of
> sediment sample S1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 2 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1210

DIRECTION OF PHOTOGRAPH:
> NE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S2

DESCRIPTION: > Sediment sample S2

>

DATE: > 10/24/89

TIME: > 1210

DIRECTION OF PHOTOGRAPH:
> NE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S2

DESCRIPTION: > Perspective of sediment sample S2

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 3 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1220

DIRECTION OF PHOTOGRAPH:
> SE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S3

DESCRIPTION: > Sediment sample S3

>

DATE: > 10/24/89

TIME: > 1220

DIRECTION OF PHOTOGRAPH:
> SE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S3

DESCRIPTION: > Perspective of

> sediment sample S3.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 4 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1230

DIRECTION OF PHOTOGRAPH:
> South

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S4

DESCRIPTION: > Soil sample S4

>

DATE: > 10/24/89

TIME: > 1230

DIRECTION OF PHOTOGRAPH:
> South

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S4

DESCRIPTION: > Perspective of

> soil sample S4.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 5 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1315

DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S5

DESCRIPTION: > Soil sample S5

>

DATE: > 10/24/89

TIME: > 1315

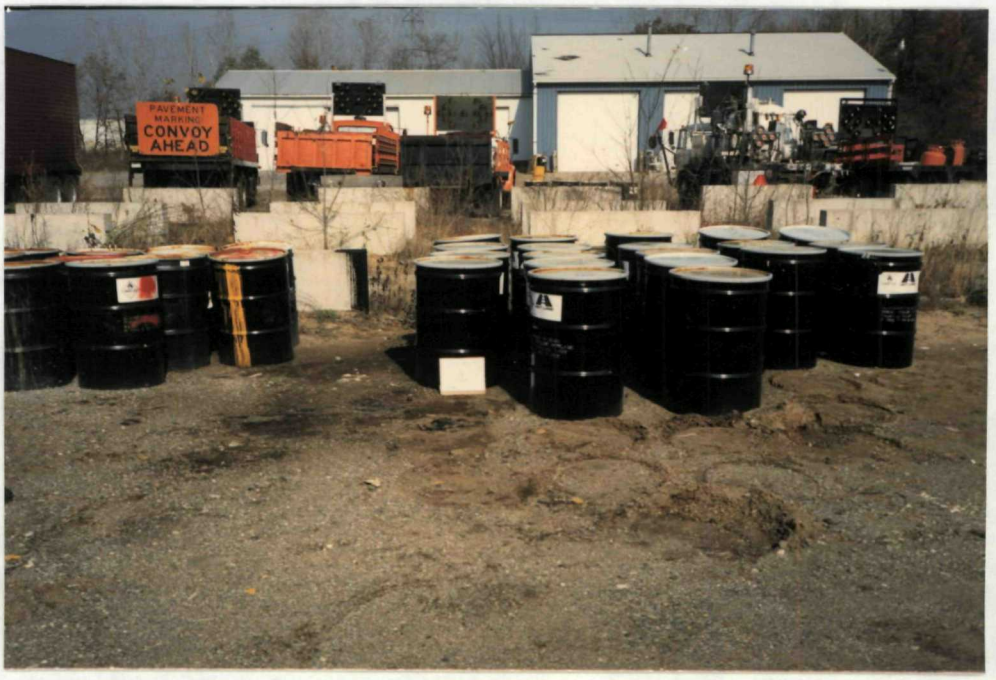
DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S5



DESCRIPTION: > Perspective of soil sample S5

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 6 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1300

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S6

DESCRIPTION: > Soil sample S6

>

DATE: > 10/24/89

TIME: > 1300

DIRECTION OF PHOTOGRAPH:
> North

WEATHER CONDITIONS:
> Sunny

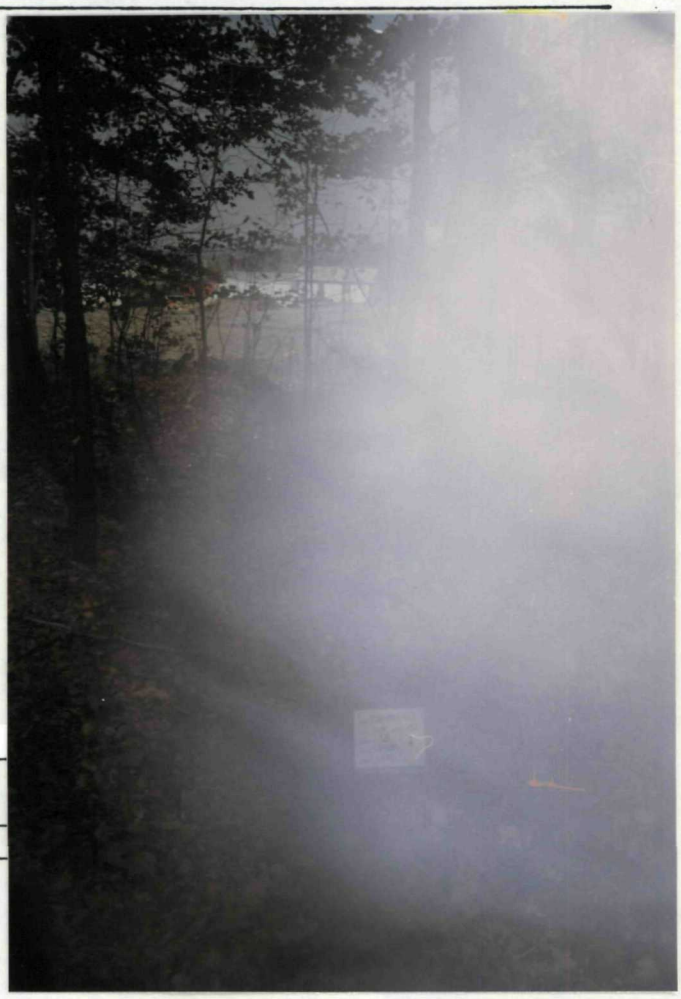
> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> S6

DESCRIPTION: > Perspective of

> soil sample S6



FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 7 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/25/89

TIME: > 1030

DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> MW1

DESCRIPTION: > Monitoring well sample MW1

>

DATE: > 10/25/89

TIME: > 1030

DIRECTION OF PHOTOGRAPH:
> East

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> MW1

DESCRIPTION: > Perspective of monitoring well sample MW1

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 8 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1115

DIRECTION OF PHOTOGRAPH:
> NE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> N/A

DESCRIPTION: > Cook and Thorburn drain along railroad tracks.

>

DATE: > 10/24/89

TIME: > 1115

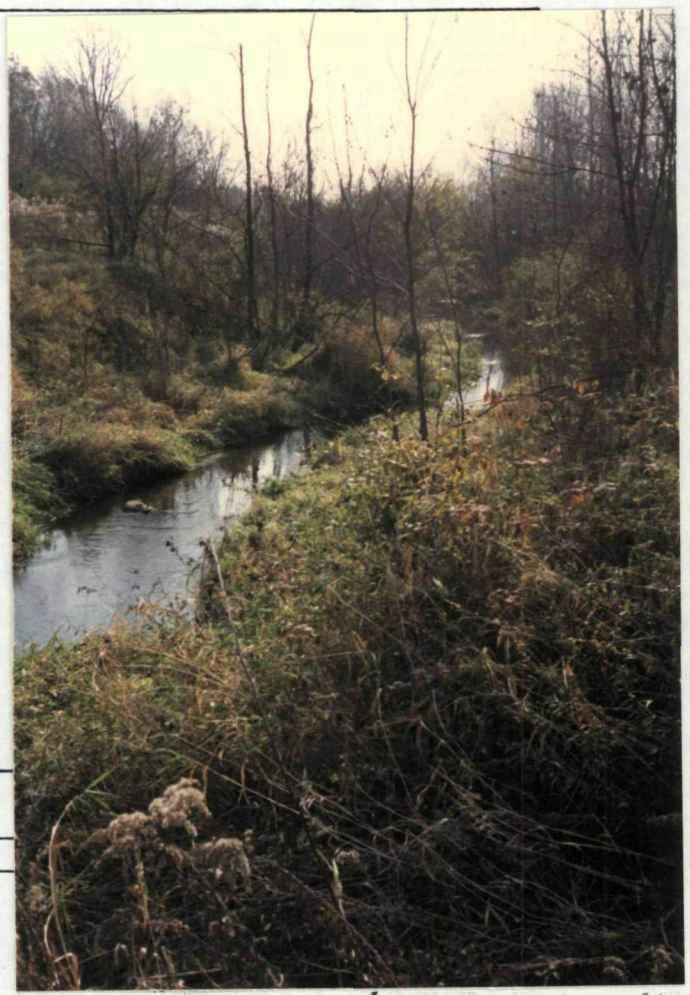
DIRECTION OF PHOTOGRAPH:
> SE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> N/A



DESCRIPTION: > Cook and Thorburn

> drain.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 9 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1130

DIRECTION OF PHOTOGRAPH:
> W

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> N/A

DESCRIPTION: > Drain exiting Pond #2 flowing east to the
> Cook and Thorburn Drain.

DATE: > 10/24/89

TIME: > 1125

DIRECTION OF PHOTOGRAPH:
> NE

WEATHER CONDITIONS:
> Sunny

> 60°F

PHOTOGRAPHED BY:
> D. Wagner

SAMPLE ID (if applicable):
> N/A

DESCRIPTION: > Point of confluence of above drain with
> Cook and Thorburn Drain

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 10 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89 TIME: > 1135 DIRECTION OF PHOTOGRAPH: > W PHOTOGRAPHED BY: > D. Wagner

WEATHER CONDITIONS: > Sunny, 60°F SAMPLE ID (if applicable): > N/A

DESCRIPTION: > Panoramic views of Pond #2 and its west shoreline.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Spartan Sign Asphalt Paving Co. PAGE 11 OF 11

U.S. EPA ID: MID005337092 TDD: F05-8901-013 PAN: FMI0674SA

DATE: > 10/24/89

TIME: > 1130

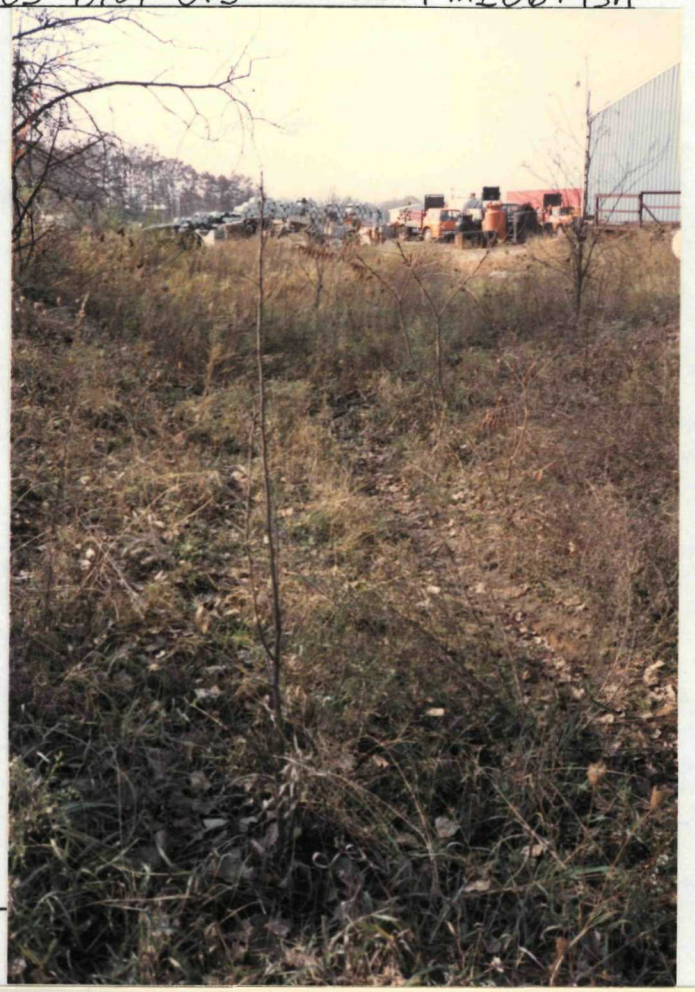
DIRECTION OF PHOTOGRAPH: > West

WEATHER CONDITIONS: > Sunny, 60°F

PHOTOGRAPHED BY: > D. Wagner

SAMPLE ID (if applicable): > N/A

DESCRIPTION: > Drainage pattern
> from site to wetland and
> Cook and Thorburn Drain
> to the east.
>
>



DATE: > 10/24/89

TIME: > 1140

DIRECTION OF PHOTOGRAPH: > East

WEATHER CONDITIONS: > Sunny

> 60°F

PHOTOGRAPHED BY: > D. Wagner

SAMPLE ID (if applicable): > N/A

DESCRIPTION: > Barrels located to the north and east of the plant.

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

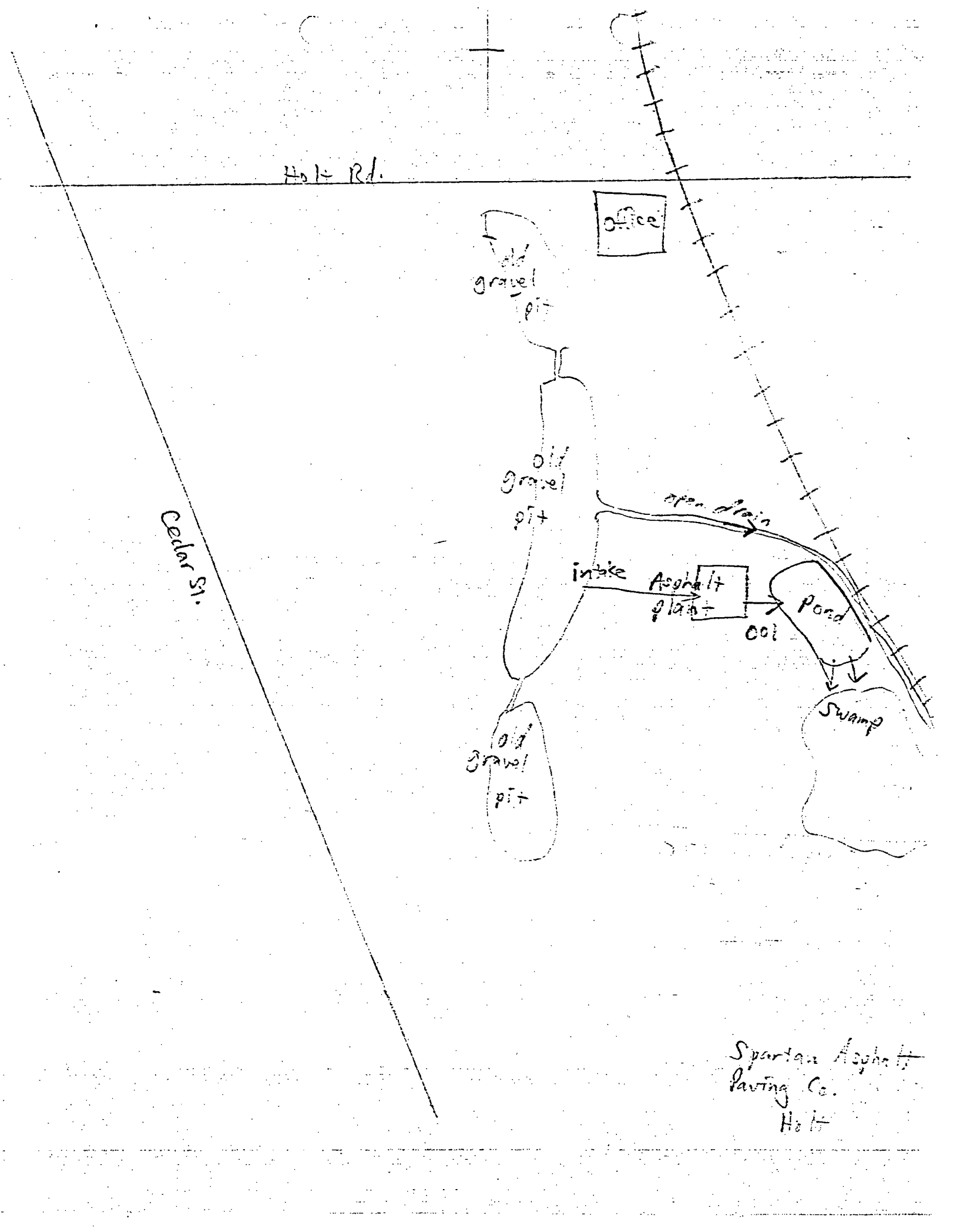
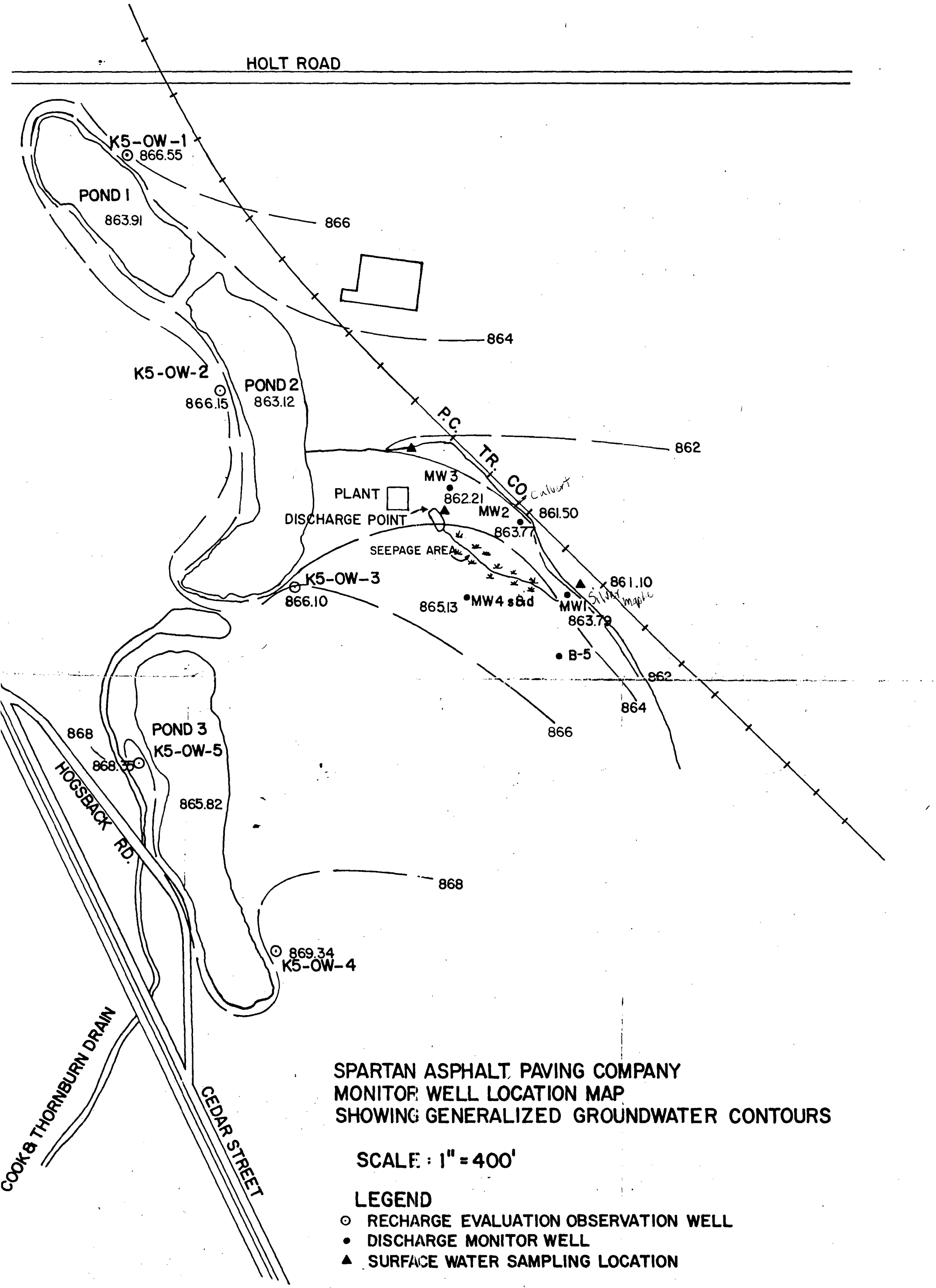

Holt Rd.
Cedar St.
office
old gravel pit
old Gravel pit
old Gravel pit
open drain
intake
Asphalt plant
coil
Pond
Swamp
Sparton Asphalt Paving Co. Holt

EXHIBIT 2



SPARTAN ASPHALT PAVING COMPANY
MONITOR WELL LOCATION MAP
SHOWING GENERALIZED GROUNDWATER CONTOURS

SCALE : 1" = 400'

LEGEND

- ⊙ RECHARGE EVALUATION OBSERVATION WELL
- • DISCHARGE MONITOR WELL
- ▲ SURFACE WATER SAMPLING LOCATION

Spartan Asphalt Paving
Ingham Co./Eas[illegible]

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

APR 8 1977

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

[redacted]

GEOLOGICAL SURVEY COPY

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

[redacted]

Form 7001 Rev. 12/63

Page 1 of	MICHIGAN DEPARTMENT OF CONSERVATION GEOLOGICAL SURVEY DIVISION	Permit No.
Sample No.	WATER WELL RECORD	Owner No.

[redacted]

MICHIGAN DEPARTMENT OF CONSER
OLOGICAL SURVEY DIVISIO

WATER WELL RECORD

401 Rev. 12/63

MICH[redacted]N DEPARTMENT OF CONSER[redacted]ON
GEOLOGICAL SURVEY DIVISION

Permit No.

WATER WELL RECORD

[redacted]

GEOLOGICAL SURVEY SAMPLE No. [ ] (3) [ ]

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

GEOLOGICAL SURVEY SAMPLE No.

NOV 01 1972

(4) WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1. LOCATION OF WELL

[redacted]

GEOLOGICAL SURVEY SAMPLE No.
1120
S/N 5 R 72-18

APR 08 1974

(2)

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF

[redacted]

GEOLOGICAL SURVEY SAMPLE No.

S/19579-2
Invoice #2293

DEC 14 1979

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

1

GEOLOGICAL SURVEY SAMPLE No.

NOV 01 197

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

GEOLOGICAL SURVEY SAMPLE No.

AUG 03 1978

#1130

WATER WELL RECORD

MICHIGAN DEPARTMENT

GEOLOGICAL SURVEY SAMPLE No.

APR 08 1974

S/N 8R73-8 #1645 APR 08 19 WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

4

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF

5

[redacted]

GEOLOGICAL SURVEY SAMPLE No.

JUN 19 1980

WATER WELL RECORD

MICHIGAN DEPARTMENT

6

[redacted]

GEOLOGICAL SURVEY COPY